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Scientific and Technical Information Center

SEARCH REQUEST FORM

Requester's Full Name: James H. Abburn-Acevedo Examiner #: 8/159 Date: 5/24/06
Art Unit: 16/6 Phone Number: 2-5548 Serial Number: 10/526,339
Location (Bldg/Room#): Room 4468 (Mailbox #): 4C70 Results Format Preferred (circle): PAPER DISK

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: Compounds For Use As Surfactants

Inventors (please provide full names): Brian Edgar Laker; Christopher James Lunniss; and
Alison Judith Redgrave

Earliest Priority Date: 3/6/2002

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search the structure of claim 1 (attached)

Keywords: Synthesis; Process of making; Preparation; respiratory

Thank you!

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Searcher: an

Searcher Phone #: 22504

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Date Searcher Picked Up: 6/8/06

Date Completed: 6/8/06

Searcher Prep & Review Time: 15

Online Time: 720

Type of Search

____ NA Sequence (#)

____ AA Sequence (#)

☒ Structure (#)

____ Bibliographic

____ Litigation

____ Fulltext

____ Other

Vendors and cost where applicable

☒ STN _____ Dialog

____ Questel/Orbit _____ Lexis/Nexis

____ Westlaw _____ WWW/Internet

____ In-house sequence systems

____ Commercial _____ Oligomer _____ Score/Length

____ Interference _____ SPDI _____ Encode/Transl

____ Other (specify)

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STRUCTURE FILE UPDATES: 7 JUN 2006 HIGHEST RN 887123-67-3
 DICTIONARY FILE UPDATES: 7 JUN 2006 HIGHEST RN 887123-67-3

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TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

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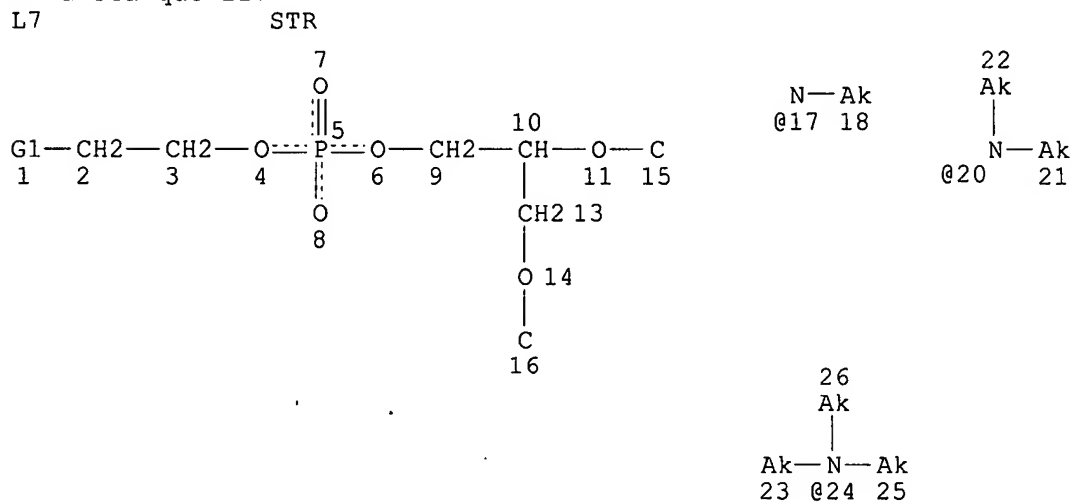
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 * The CA roles and document type information have been removed from *
 * the IDE default display format and the ED field has been added, *
 * effective March 20, 2005. A new display format, IDERL, is now *
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 *

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VAR G1=N/17/20/24
 NODE ATTRIBUTES:

jan delaval - 8 june 2006

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L2 49 S E4-E6
E LUNNISS C/AU
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L3 11 S E4,E6,E7
E REDGRAVE A/AU
L4 41 S E4-E6
SEL RN L1

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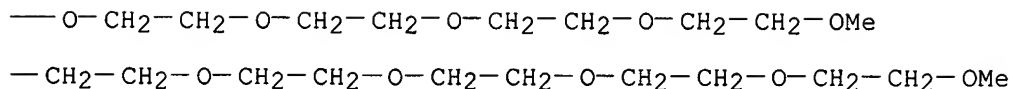
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L18 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2006 ACS on STN
RN 596110-92-8 REGISTRY
ED Entered STN: 01 Oct 2003
CN 3,5,9,12,15,18,21,24,27,30-Decaoxa-4-phosphadotriacontan-1-aminium,
32,32,32-trifluoro-4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(23,23,23-trifluoro-
1-oxo-3,6,9,12,15,18,21-heptaotricos-1-yl)oxy]-, inner salt, 4-oxide
(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C40 H74 F6 N O22 P
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:247178

=> fil uspatful

FILE 'USPATFULL' ENTERED AT 16:03:17 ON 08 JUN 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 8 Jun 2006 (20060608/PD)
FILE LAST UPDATED: 8 Jun 2006 (20060608/ED)
HIGHEST GRANTED PATENT NUMBER: US7058980
HIGHEST APPLICATION PUBLICATION NUMBER: US2006123525
CA INDEXING IS CURRENT THROUGH 8 Jun 2006 (20060608/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 8 Jun 2006 (20060608/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2006
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2006

=> d bib abs hitstr 124

L24 ANSWER 1 OF 1 USPATFULL on STN
AN 2005:330101 USPATFULL
TI Compounds for use as surfactants
IN Looker, Brian Edgar, Hertfordshire, UNITED KINGDOM
Lunniss, Christopher James, Hertfordshire, UNITED KINGDOM
Redgrave, Alison Judith, Hertfordshire, UNITED KINGDOM
PI US 2005287076 A1 20051229
AI US 2003-506339 A1 20030304 (10)
WO 2003-GB876 20030304
20050511 PCT 371 date
PRAI GB 2002-5327 20020306
DT Utility
FS APPLICATION
LREP GLAXOSMITHKLINE, CORPORATE INTELLECTUAL PROPERTY, MAI B475, FIVE MOORE
DR., PO BOX 13398, RESEARCH TRIANGLE PARK, NC, 27709-3398, US
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1170
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compounds of formula (I): ##STR1## and uses of such compounds are
described.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

jan delaval - 8 june 2006

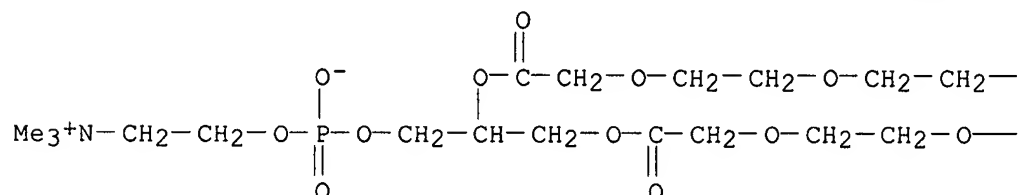
IT 596110-91-7P 596110-92-8P

(synthesis of compds. for use as surfactants in aerosol formulations)

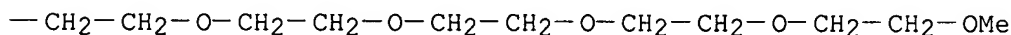
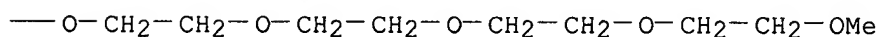
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28-hydroxy-N,N,N-trimethyl-22-oxo-25-[(1-oxo-3,6,9,12,15,18,21-
heptaoxadocos-1-yl)oxy]-, inner salt, 28-oxide (9CI) (CA INDEX NAME)

PAGE 1-A



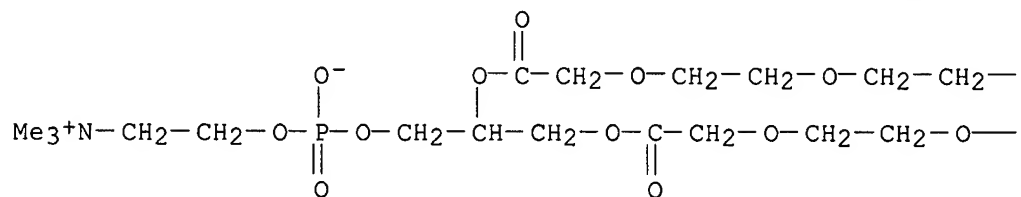
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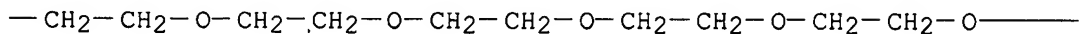
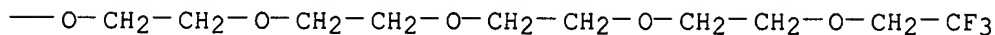
RN 596110-92-8 USPATFULL

CN 3,5,9,12,15,18,21,24,27,30-Decaoxa-4-phosphadotriacontan-1-aminium,
32,32,32-trifluoro-4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(23,23,23-
trifluoro-1-oxo-3,6,9,12,15,18,21-heptaoxatricos-1-yl)oxy]-, inner salt,
4-oxide (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



PAGE 1-C

—CH₂—CF₃

=> fil hcaplus

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FILE COVERS 1907 - 8 Jun 2006 VOL 144 ISS 24

FILE LAST UPDATED: 7 Jun 2006 (20060607/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all hitstr l23

L23 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:719494 HCAPLUS

DN 139:247178

ED Entered STN: 14 Sep 2003

TI Synthesis of compounds for use as surfactants in aerosol formulations

IN **Looker, Brian Edgar; Lunniss, Christopher James;****Redgrave, Alison Judith**

PA Glaxo Group Limited, UK

SO PCT Int. Appl., 44 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07F0009-10

ICS A61K0009-72

CC 46-3 (Surface Active Agents and Detergents)

Section cross-reference(s): 63

FAN.CNT 1

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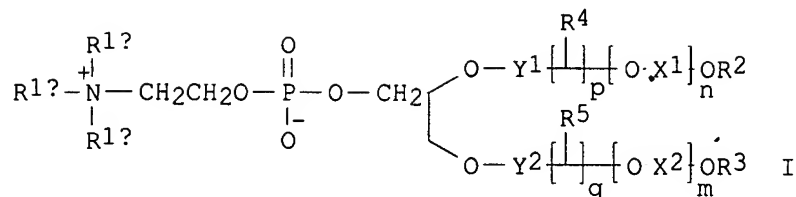
jan delaval - 8 june 2006

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 EP 1480990 A1 20041201 EP 2003-708328 20030304 <--
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 ES 2250874 T3 20060416 ES 2003-3708328 20030304 <--
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 PRAI GB 2002-5327 A 20020306 <--
 WO 2003-GB876 W 20030304 <--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003074537	ICM	C07F0009-10
	ICS	A61K0009-72
	IPCI	C07F0009-10 [ICM,7]; C07F0009-00 [ICM,7,C*]; A61K0009-72 [ICS,7]
	IPCR	C07F0009-00 [I,C*]; C07F0009-10 [I,A]
	ECLA	A61K009/00M20B; C07F009/10
AU 2003212509	IPCI	C07F0009-10 [ICM,7]; C07F0009-00 [ICM,7,C*]; A61K0009-72 [ICS,7]
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EP 1480990	IPCI	C07F0009-10 [ICM,7]; C07F0009-00 [ICM,7,C*]; A61K0009-72 [ICS,7]
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JP 2005519119	IPCI	C07F0009-11 [ICM,7]; C07F0009-00 [ICM,7,C*]; A61K0009-12 [ICS,7]; A61K0047-06 [ICS,7]; A61K0047-24 [ICS,7]
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ES 2250874	IPCI	C07F0009-10 [ICS,4]; C07F0009-00 [ICS,4,C*]; A61K0009-72 [ICS,4]
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	ECLA	A61K009/00M20B; C07F009/10
US 2005287076	IPCI	A61K0009-14 [ICM,7]; C07F0009-02 [ICS,7]; C07F0009-00 [ICS,7,C*]
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	ECLA	A61K009/00M20B; C07F009/10

OS MARPAT 139:247178
 GI



- AB Compds. of formula I or a salt or solvate thereof useful as surfactants in aerosol formulations are synthesis, wherein: m, n, p and q independently represent an integer 1 to 12; R1a, R1b and R1c independently represent C1-3 alkyl or hydrogen; R2 and R3 independently represent C1-4 alkyl optionally substituted with up to 5 fluorine atoms or -COC1-2 alkyl optionally substituted with up to 5 fluorine atoms; R4 and R5 independently represent -CH3 or hydrogen. X1 and X2 independently represent -(CH2)2-, -(CH2)3-, -CH(CH3)CH2-, -CH2CH(CH3)-, -CH(CH3)CH2CH2-, -CH2CH(CH3)CH2-, CH2CH2CH(CH3)- or -COCH(CH3)-; and Y1 and Y2 independently represent -CH2- or carbonyl; with the proviso that when: p and q represent 1; m and n independently represent an integer between 1 to 12; R4 and R5 represent hydrogen; X1 and X2 represent -(CH2)2-; and Y1 and Y2 represent -CH2-; then R2 and R3 may only represent C1-2 alkyl optionally substituted with up to 5 fluorine atoms or -COC1-2 alkyl optionally substituted with up to 5 fluorine atoms.
- ST aerosol surfactant synthesis; bisheptaoadocosanoyl propyl trimethylammonium ethyl phosphate synthesis; bistrifluoroheptaoadotricosanoyl propyl trimethylammonium ethyl phosphate synthesis
- IT Drug delivery systems
(aerosols; synthesis of compds. for use as surfactants in aerosol formulations)
- IT Propellants (sprays and foams)
Respiratory system, disease
Surfactants
(synthesis of compds. for use as surfactants in aerosol formulations)
- IT 7440-05-3, Palladium, uses
RL: CAT (Catalyst use); USES (Uses)
(on carbon; synthesis of compds. for use as surfactants in aerosol formulations)
- IT 431-89-0 811-97-2, 1,1,1,2-Tetrafluoroethane
RL: TEM (Technical or engineered material use); USES (Uses)
(propellant; synthesis of compds. for use as surfactants in aerosol formulations)
- IT 865-47-4, Potassium t-butoxide
RL: CAT (Catalyst use); USES (Uses)
(synthesis of compds. for use as surfactants in aerosol formulations)
- IT 24342-68-5P 75427-75-7P, 2,5,8,11,14,17,20-Heptaoadocosan-22-oic acid
129086-11-9P 405518-53-8P 405518-62-9P 405518-63-0P 405518-64-1P
596110-90-6P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of compds. for use as surfactants in aerosol formulations)
- IT **596110-91-7P 596110-92-8P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of compds. for use as surfactants in aerosol formulations)
- IT 75-89-8 98-59-9, 4-Toluenesulfonyl chloride 100-39-0, Benzyl bromide
105-36-2, Ethyl bromoacetate 563-24-6, Glycerophosphorylcholine
2615-15-8, Hexaethylene glycol 23601-40-3, 2,5,8,11,14,17-Hexaoadonadecan-19-ol
RL: RCT (Reactant); RACT (Reactant or reagent)

(synthesis of compds. for use as surfactants in aerosol formulations)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Applications Et Transferts de Technologies Avancees; WO 9015807 A 1990 HCAPLUS
 (2) Fisons Plc; WO 9200061 A 1992 HCAPLUS
 (3) Glaxo Group Ltd; WO 03011874 A 2003 HCAPLUS
 (4) Glaxo Wellcome Inc; WO 9609816 A 1996 HCAPLUS
 (5) Kabushiki Kaisha Yakult Honsha; EP 0422241 A 1991 HCAPLUS
 (6) Novo Industri AS; EP 0272097 A 1988 HCAPLUS

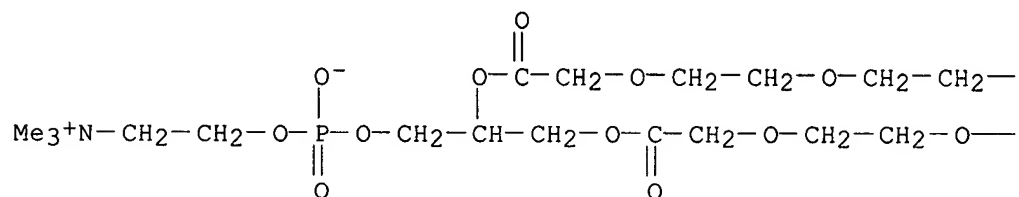
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RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (synthesis of compds. for use as surfactants in aerosol formulations)

RN 596110-91-7 HCAPLUS

CN 2,5,8,11,14,17,20,23,27,29-Decaoxa-28-phosphahentriacontan-31-aminium,
 28-hydroxy-N,N,N-trimethyl-22-oxo-25-[(1-oxo-3,6,9,12,15,18,21-
 heptaoxadocos-1-yl)oxy]-, inner salt, 28-oxide (9CI) (CA INDEX NAME)

PAGE 1-A



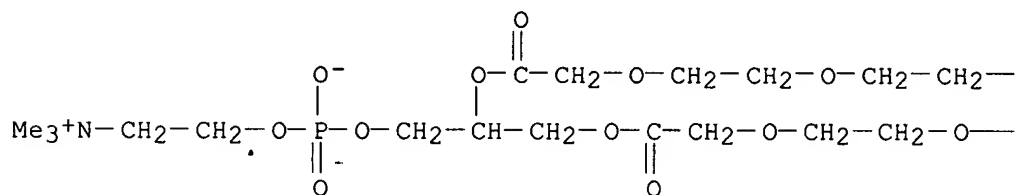
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RN 596110-92-8 HCAPLUS

CN 3,5,9,12,15,18,21,24,27,30-Decaoxa-4-phosphadotriacontan-1-aminium,
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 (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

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PAGE 1-C

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FILE 'HCAPLUS' ENTERED AT 15:42:37 ON 08 JUN 2006

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 L2 49 S E4-E6
 E LUNNISS C/AU
 E LUNNIS C/AU
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 L20 64 S L19 AND O>=10

FILE 'HCAOLD' ENTERED AT 16:02:46 ON 08 JUN 2006

L21 0 S L18

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FILE 'HCAPLUS' ENTERED AT 16:02:48 ON 08 JUN 2006
L22 1 S L18
L23 1 S L22 AND L1-L4

FILE 'USPATFULL' ENTERED AT 16:02:54 ON 08 JUN 2006
L24 1 S L18

FILE 'REGISTRY' ENTERED AT 16:03:06 ON 08 JUN 2006

FILE 'USPATFULL' ENTERED AT 16:03:17 ON 08 JUN 2006

FILE 'HCAPLUS' ENTERED AT 16:03:27 ON 08 JUN 2006

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